Landscape Design Series 2

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Biomes

- Biomes Are Life Zones

Biomes

- They Include All
- Plants
- Animals
- Other Organisms
- The Physical Environment In A Particular Area

Biomes

- A Biome Is Characterized By Its Plant Life

Biomes

- These Types Are Determined By
- Climatic Conditions
- Latitude
- Altitude

Biomes

- Northern Coniferous Forests Exist In Subarctic Portions Of North America And Asia But Further North Conditions Are Simply Too Harsh And The Season Too Brief For Trees To Grow

Biomes

- Instead Of Trees, The Short Vegetation Of The Tundra Thrives In These Areas. The Same Phenomenon Occurs With Altitude, As Trees Give Way To Short Alpine Vegetation In High Mountainous Regions

Biomes

- A Biome Is Composed Of Many Ecosystems —Smaller Communities Of Plants And Animals And Their Habitats (The Physical Parts Of Their Environment That Affect Them)

Biomes

- The Boundaries Of A Biome Are Determined By Climate
- The Boundaries Of Ecosystems Are Physical Features, Such As Ridges Or Riverbanks, That Separate One Community From Another

Biomes

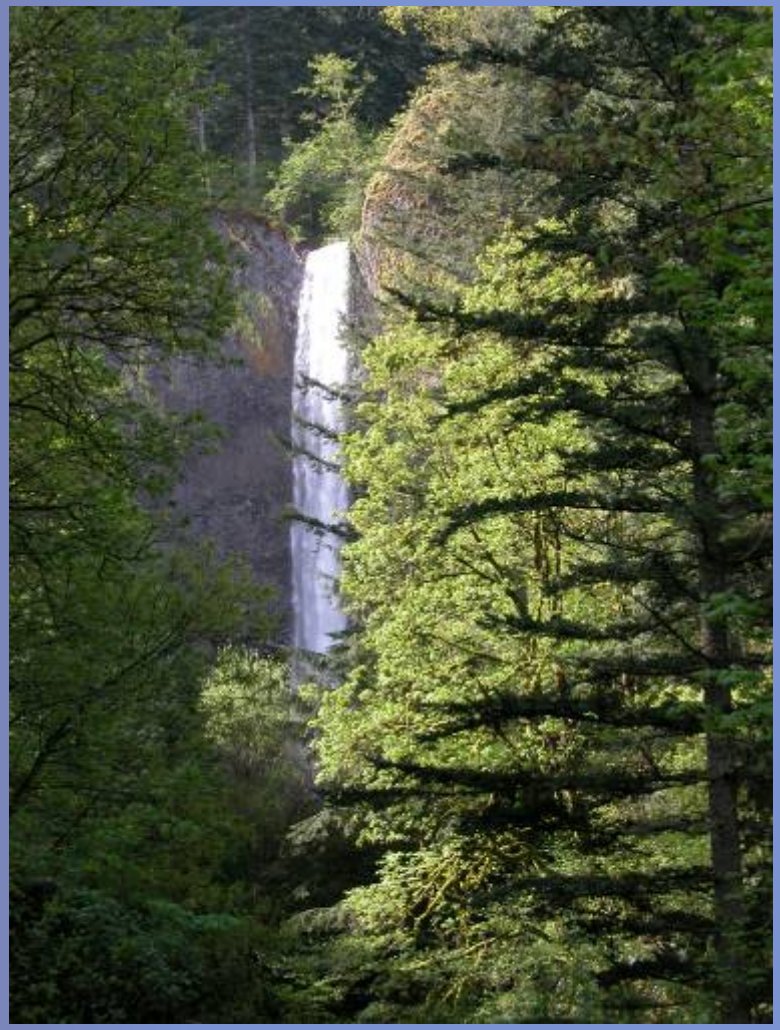
- The Ecosystems Of A Particular Biome Tend To Have Plants With Similar Growth Forms And Animals With Similar Feeding Habits

Biomes

- Major Terrestrial Biomes Include
- Tropical Rain Forest
- Northern Coniferous Forest
- Tundra
- Desert
- Grassland
- Savanna
- Chaparral

Tropical Rain Forest

Northern Coniferous Forest

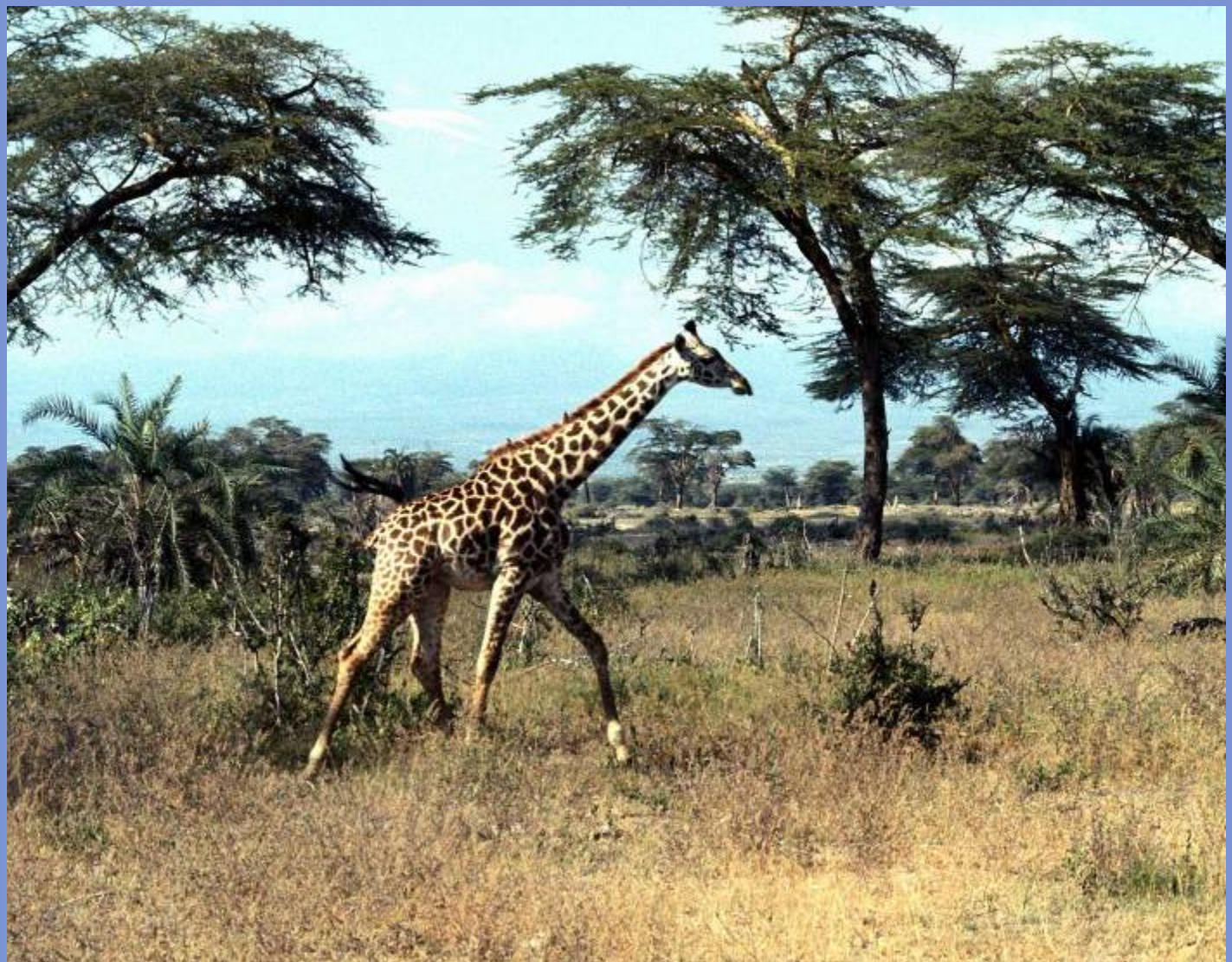


Tundra

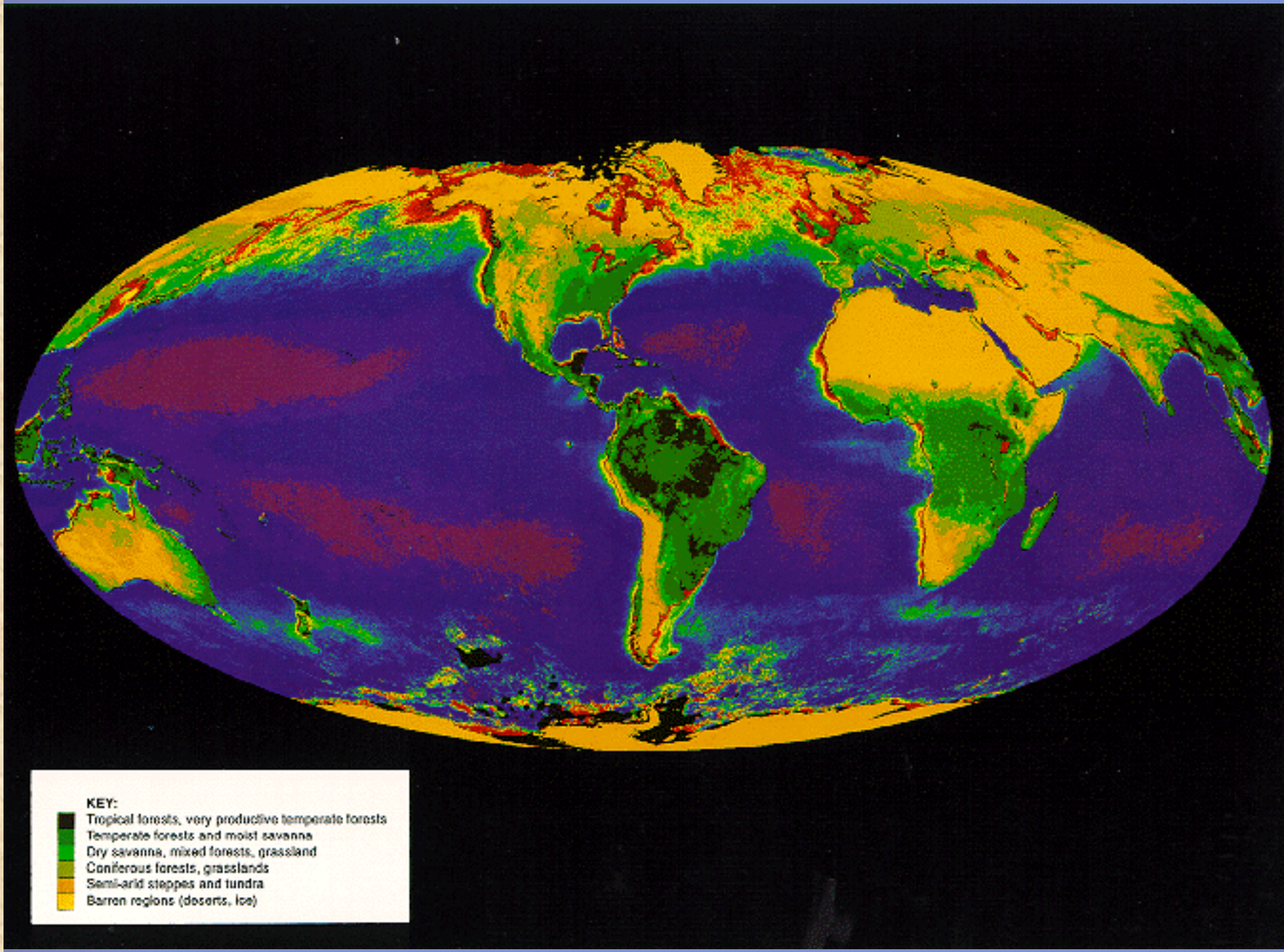
Desert

Grassland

Savanna



Chaparral


KEY:
Tropical forests, very productive temperate forests
Temperate forests and moist savanna
Dry savanna, mixed forests, grassland
Coniferous forests, grasslands
Semi-arid steppes and tundra
Barren regions (deserts, ice)

Mediterranean Biome

- Each of the 5 Mediterranean biomes lies within 30°-45° latitude except for the Mediterranean Basin itself.

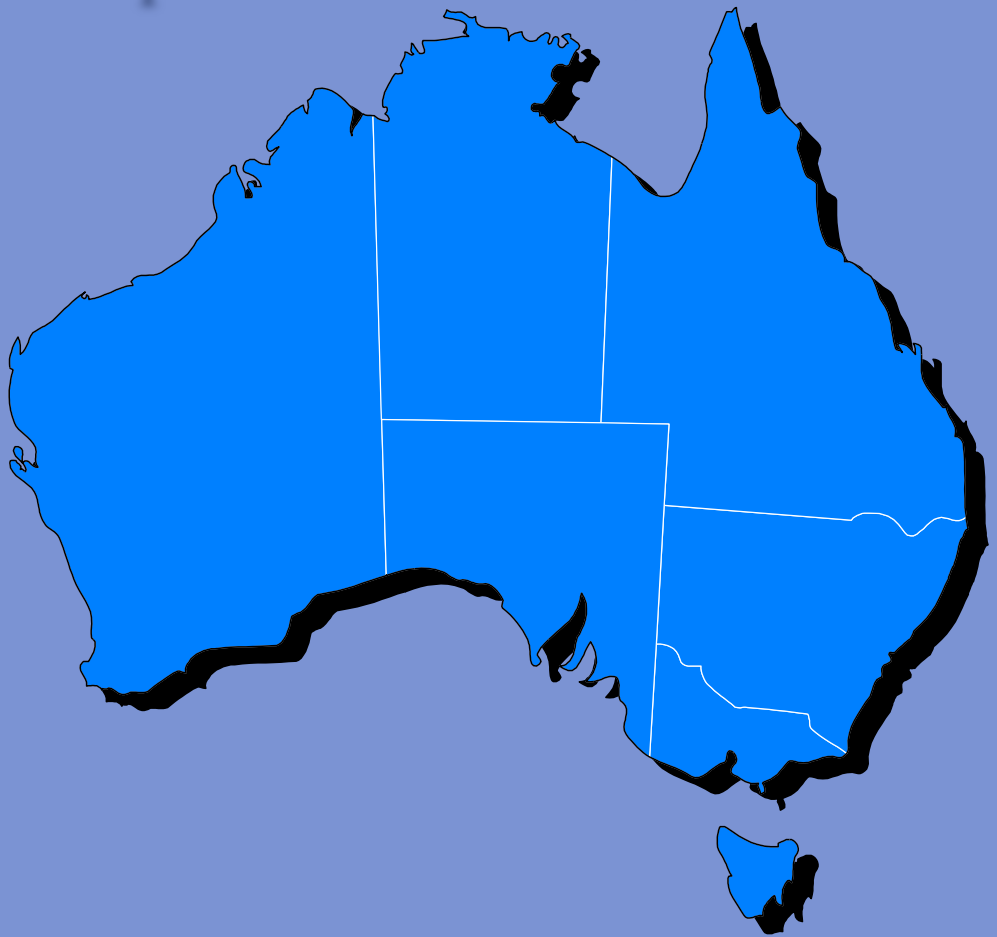
In total these 5 areas comprise about 2% of the earth's landmass

Mediterranean Biome

- The largest of them is the Mediterranean itself with about 60% of the world's Mediterranean climate.
- This basin is the most northerly, because of the east-west mountain ranges which lie to the north
- Their shelter extends the 'Mediterranean effect'

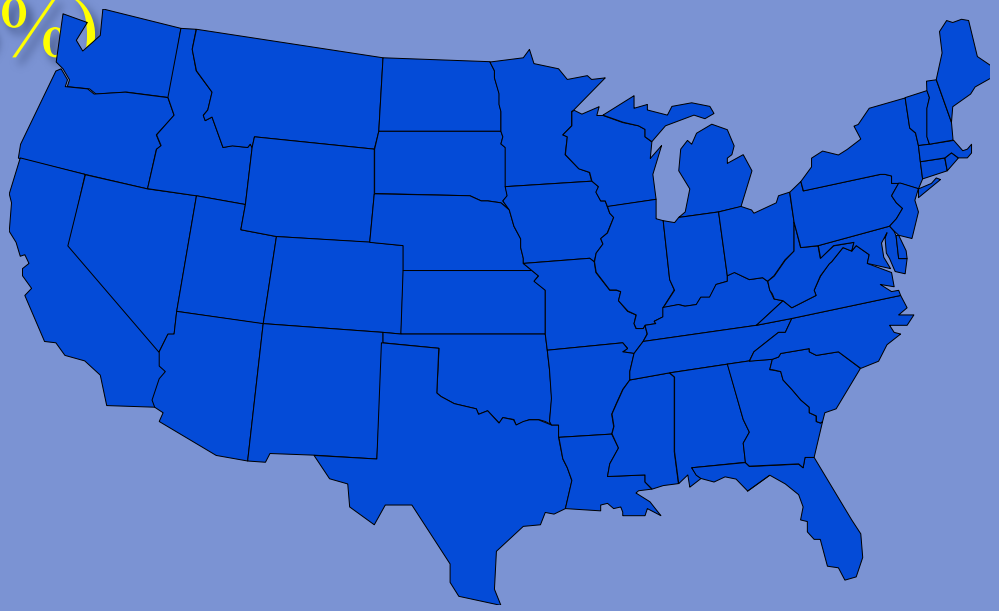
Mediterranean Biome

- Next is South and Western Australia, which together equal about 22%



Mediterranean Biome

- The remaining three are
- California (10%)
- Chile (5%)
- South Africa (3%)



Mediterranean Biome

- The remaining three are
- California (10%)
- Chile (5%)
- South Africa (3%)

Mediterranean Biome

- This last and smallest Mediterranean climate is the richest of the 6 floristic kingdoms of the world

Mediterranean Biome

- It has a density of 1,300 species/10,000km2
- The next closest, the South American rainforests, has 400 species/10,000km2

Mediterranean Biome

- It contains more than 80% of the plant species found in the entire Mediterranean climate region

Mediterranean Biome

- Mediterranean climates are characterized by cool, wet winters and dry summers

Mediterranean Biome

- Temperatures vary considerably
- Some areas have hard frosts in winters
- Others barely any frost at all

Mediterranean Biome

- In some areas summers are unbearably hot and dry others mild and foggy

Mediterranean Biome

- Plants native to these areas are genetically programmed to withstand these specific conditions

Mediterranean Biome

- One common adaptation is a summer dormancy period

Mediterranean Biome

- That is the most difficult season to survive (as opposed to a freezing winter)

Mediterranean Biome

- These ranges of conditions in otherwise similar climates create a variety of plant adaptations that are particularly useful to gardeners in areas of numerous microclimates

Mediterranean Biome

- Working with the natural forces that shape unique regions, we can create astonishing beauty as well as minimal maintenance through climate appropriate plantings

Mediterranean Biome

- It is sometimes referred to as chaparral

Mediterranean Biome

- Trees in this biome may be coniferous (cedar and stone pine)

Mediterranean Biome

- Deciduous (sweet chestnut, hornbeam and beech) and evergreen (holm oak)

Mediterranean Biome

- Many of the shrubs are aromatic, such as lavender and rosemary

Mediterranean Biome

- Humans soon made use of the plant-life in the region
- These included grapes, olives, figs, carobs and cereal grasses

Mediterranean Biome

- Grass species found in the Mediterranean, such as wheat and barley, were the first plant species to be domesticated 10,000 years ago

Mediterranean Biome

- A characteristic Mediterranean plant community is the maquis or macchie

Mediterranean Biome

- This is made up of tall shrubs, 2 m high or more, with stiff, woody branches and small, dark green leathery leaves
- Maquis plants include myrtle, hawthorn and broom, and many are aromatic

Mediterranean Biome

- Garigue is another type of Mediterranean vegetation

Mediterranean Biome

- It is characterized by low scattered bushes about 18 inches high, interspersed with patches of bare rock

Mediterranean Biome

- Thyme, sage, lavender, garlic, tulips, irises and orchids are all found in garigue

Mediterranean Biome

- The variety and richness of this biome meant that it was one of the first to be colonized by man

Mediterranean Biome

- Many plants are xerophytic (have adaptations which enable them to survive periods of prolonged drought)

Mediterranean Biome

- Many Mediterranean plants also benefit from fire
- The high temperatures and oils released by various species make a highly flammable biome

Mediterranean Biome

- Some plants have seeds that germinate only after a fire and others re-sprout from the roots after a fire.

Mediterranean Biome

- A high proportion of Mediterranean plants are endemic
- In Greece, one in every five plants is found here and nowhere else
- In the Balkans, one in four plants are endemic

Mediterranean Biome

- Flooding of the Mediterranean dissected the land into islands and peninsulas

Mediterranean Biome

- Many plants associated with the Mediterranean are not native
- These include olives, oranges, lemons, figs, pomegranates and bougainvillea

Mediterranean Biome

- These plants were introduced so many years ago that they are fully established in the Mediterranean

Mediterranean Biome